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**PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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First Named
Inventor: Michael M. Seiy

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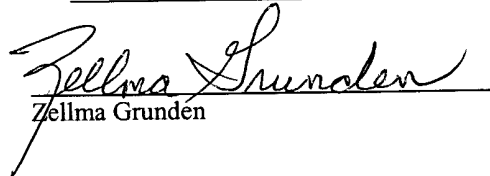
Examiner
Name: David R. Dunn

Title: APPARATUS AND METHOD FOR
AUTOMATICALLY LEVELING AN
OBJECT

Certificate Under 37 CFR 1.8(a)

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on November 19, 2004


Zellma Grunden

AMENDMENT

Mail Stop Amendment
Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Official Action mailed July 21, 2004, in connection with the
above-identified application, reconsideration is respectfully requested for the expressed herein.

As a preliminary matter, the Applicants wish to acknowledge with appreciation the Examiner's analysis and efforts in examining this application. The Examiner is also thanked for the indication that claims 4, 5, 11, 12, and 19 are allowable, and only objected to as being dependent on a rejected base claim.

On pages 2 and 3 of the Official Action, the Examiner rejected Claims 8-10 and 13-18 under 35 U.S.C. § 102(b) as being anticipated by Uriarte (5,143,386). The Examiner alleges that Uriarte discloses an apparatus for automatically leveling a vehicle, comprising: a plurality of legs (20); wherein each of the legs is movable between a retracted stowed position (completely retracted) and an extended use position; and wherein each of the legs is movable to the retracted stowed position to allow the vehicle to travel and each of the legs is movable to the extended use position to engage a ground surface prior to leveling the vehicle (inherent); a sensor (205; Figure 4b) mounted to the vehicle to sense pitch and roll (see column 4, lines 1-20) of the vehicle relative to a reference level plane (column 7, lines 26-27); a controller (200) coupled to each of the legs and the sensor, wherein the controller monitors the orientation signal received from the sensor and in response to that signal the controller causes at least one of the legs to retract to move the vehicle downwardly relative to the ground surface, for orienting the vehicle with the reference plane within a tolerance (see column 9, lines 11-28). The sensor provides the orientation signal to the controller indicating a change in the vehicle orientation after each leg engages the ground and extends sufficiently to affect the vehicle orientation (inherent). The controller interprets the orientation signal after each adjustment to determine whether a portion of the vehicle has passed through the reference level plane (see column 9, lines 20-25). The apparatus includes switches for individually actuating the legs (116; see Figure 5a). Each legs has a sensor to signal when the leg is stowed (see column 3, lines 10-17). Regarding the method of claims 15-18, the Examiner alleges the apparatus as described above performs the method as claimed.

Reconsideration of the rejection is respectfully requested because Uriarte does not, in fact, anticipate Claims 8-10 and 13-18. Specifically, the Examiner alleges that Uriarte discloses a reference level plane at column 7, lines 26-27. This section of Uriarte, however, merely describes a CPU that can permanently save a plurality of variables “including proportional level sensor values present when the vehicle is level.” Uriarte, therefore, merely discloses a CPU that can store the “level” position as read by the level sensor. This, however, is not a reference level plane.

Claim 8 already comprises a sensor mounted to the vehicle that senses pitch and roll of the vehicle and produces an “orientation signal.” The sensor inherently detects a level condition. The claim, however, further requires that the pitch and roll be compared to the reference level plane. The reference level plane of the present invention is established by the X, Y and “Z” coordinate system. In other words, the reference level plane not only is defined by its level position, but also its distance from a reference point, such as the ground. (See e.g., Fig. 7.) This is in contrast to merely determining a level condition based on an X, Y coordinate system, as disclosed in Uriarte. Evidence of this distinction is demonstrated by comparing, for example, Fig. 7 of the present application disclosing the reference level plane P_R at a position on X, Y, and Z coordinates, with Fig. 3(a) of Uriarte which merely shows sensor 200 measured along the R and L (X, Y) axes. There is no positioning along the “Z axis” in Uriarte determining height relative to the ground.

The reference level plane is distinguished from a merely level condition in the specification on page 16. For instance, vehicle 10 can be at true level when “in the referenced level plane P_R , or a plane which is parallel to the plane P_R .” Accordingly, the claims requiring the pitch and roll sensor be compared to the reference level plane is a comparison of the level condition to a specific plane on the X, Y, Z coordinate system, not merely the X,Y system. Accordingly, Uriarte does not disclose all of the limitations of Claim 8 through 10 and 13 through 18 of the present application.

On pages 3 and 4 of the Official Action, the Examiner rejected Claims 1-3, 6 and 7 under 35 U.S.C. § 103(a) as being obvious under Uriarte in view of Hamilton (4,913,458). The Examiner concedes that Uriarte fails to show the legs alternating between adjusting the end and side, but alleges that Hamilton shows an apparatus for adjusting the level of a vehicle wherein the leveling alternates between end and side legs (see column 23, lines 17-25). It would, thus, purportedly be obvious to one of ordinary skill in the art at the time the invention was made to modify Uriarte with the teachings of Hamilton to allow the legs to level one at a time in order to simplify the leveling process and to prevent the legs for fighting with each other during the leveling process (which may occur when legs level at the same time).


For the reasons previously articulated, Applicants assert that Uriarte fails to teach not only leveling by adjusting the end and side, but also that Uriarte fails to teach a reference level plane. Hamilton, too, does not disclose any such reference level plane. Furthermore, the “reverse logic” system disclosed in Uriarte cited by the Examiner moves the leg by an “exact amount of extension,” (i.e., distance) not for a “period of time” as claimed in Claim 1. (See column 9, line 17 of Uriarte.) Accordingly, the combination of the two references still fails to teach or suggest all the limitations of Claims 1 through 3, 6, and 7 as required for a *prima-facie* showing of obviousness. Accordingly, it is respectfully requested that this rejection be withdrawn.

If, upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact Applicants' patent counsel at the telephone number given below to discuss such issues.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. To the extent additional fees are required, please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 02-1010 (262600/82641) and please credit any excess fees to such deposit account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory S. Cooper", is written over a horizontal line.

Gregory S. Cooper

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